

**THE STUDY OF ANTIMICROBIAL PROPERTIES  
FROM PIPER BETLE LEAF EXTRACT ON SILK  
FABRIC**

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## **ABSTRACT**

### **THE STUDY OF ANTIMICROBIAL PROPERTIES FROM PIPER BETLE LEAF EXTRACT ON SILK FABRIC**

The present study aimed to test the antimicrobial activity of piper betle which was extracted using two different extraction methods applied on silk fabric. It is to increase its ability to prevent the growth of microbes that may harm the fabric itself and the wearer. Piper betle leaf was extracted using soxhlet extraction and maceration extraction method with ethanol as a solvent. The piper betle extract obtained was then exhausted on the silk fabric with two different concentrations and later tested for its antimicrobial activity against gram-positive and gram-negative bacteria which are *staphylococcus aureus* and *klebisella pneumoniae*. After 24 hours of incubation, zone of inhibition on agar plate were measured. The results showed that silk fabric treated with highly concentrated piper betle leaf extract obtained from soxhlet extraction method has larger zone of inhibition for *klebisella pneumonia* indicating that the treated fabric has great antimicrobial property.